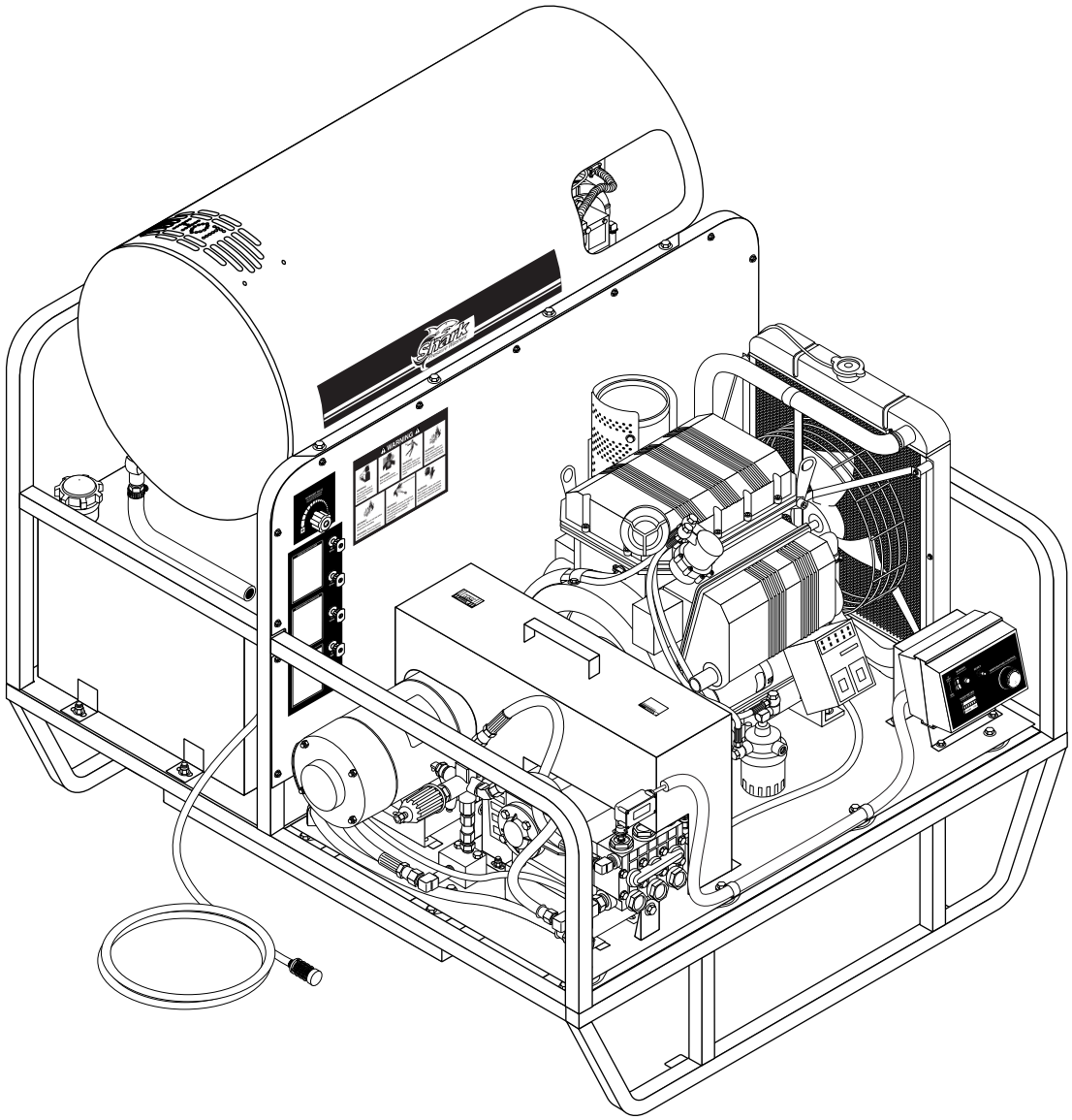
Shark Pressure Washers

# SSD
## DIESEL

# OPERATOR'S MANUAL

■ SSD-503067E ■ SSD-503067E/G
■ SSD-503061E ■ SSD-503061E/G



**SHARK PRESSURE WASHERS ■ 4275 N.W. PACIFIC RIM BLVD. ■ CAMAS, WA 98607 ■ USA**
For technical assistance or the Shark Dealer nearest you, call 1-800-771-1881.

# MACHINE SPECIFICATIONS

| Machine | Volume at Pump Head (GPM) | Pressure at Pump Head (PSI) | Weight (Lbs) | Dimensions Length x Width x Height (Inches) |
|---|---|---|---|---|
| 503067E | 5.2 | 3000 | 836 | 51" x 44" x 41" |
| 503061E | 5.2 | 3000 | 836 | 51" x 44" x 41" |
| 503067E/G | 5.2 | 3000 | 1066 | 51" x 44" x 41" |
| 503061E/G | 5.2 | 3000 | 1066 | 51" x 44" x 41" |

# OPTIONS

| Part No. | Description | Field Installation | Factory Installation |
|---|---|---|---|
| 35-130 | Stainless Steel Float Tank | | X |
| 35-131 | Stainless Steel Frame | | X |
| 35-138 | Wheel Kit | X | |
| 35-168 | Steam Combination | | X |

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Model Number _____

Serial Number _____

Date of Purchase _____

The model and serial numbers will be found on a decal attached to the pressure washer. You should record both serial number and date of purchase and keep in a safe place for future reference.

# INTRODUCTION

Thank you for purchasing a SSD Pressure Washer.

This manual covers the operation and maintenance of the SSD-503067E, SSD-503067E/G, SSD-503061E, and SSD-503061E/G, All information in this manual is based on the latest product information available at the time of printing.

Shark reserves the right to make changes at any time without incurring any obligation.

**The SSD Series was designed for maximum use of 8 hours per day, 5 days per week.**

## Owner/User Responsibility:

The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this Shark pressure washer. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

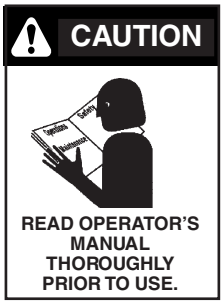
Owner and/or user must study and maintain for future reference the manufacturers' instructions.

**This manual should be considered a permanent part of the machine and should remain with it if machine is resold.**

**When ordering parts, please specify model and serial number.**

# IMPORTANT SAFETY INFORMATION

***WARNING: When using this product basic precautions should always be followed, including the following:***




***CAUTION: To reduce the risk of injury, read operating instructions carefully before using.***

1. Read the owner's manual thoroughly. Failure to follow instructions could cause a malfunction of the machine and result in death, serious bodily injury and/or property damage.
2. Know how to stop the machine and bleed pressures quickly. Be thoroughly familiar with the controls.
3. Stay alert — watch what you are doing.
4. All installations must comply with local codes. Contact your electrician, plumber, utility company or the selling distributor for specific details.

***WARNING: Risk of asphyxiation. Use this product only in a well ventilated area.***

5. Avoid installing machines in small areas or near exhaust fans. Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death. It also contains chemicals known in certain quantities, to cause cancer, birth defects, or other reproductive harm.

***WARNING: Flammable liquids can create fumes which can ignite, causing property damage or severe injury.***

***CAUTION: Risk of fire. Do not add fuel when the product is operating.***

6. Allow engine to cool for 2 minutes before refueling. If any fuel is spilled, make sure the area is dry before testing the spark plug or starting the engine. (Fire and/or explosion may occur if this is not done.)

   Gasoline engines on mobile or portable equipment shall be refueled:

   (a) outdoors;

   (b) with the engine on the equipment stopped;

   (c) with no source of ignition within 10 feet of the dispensing point; and

   (d) with an allowance made for expansion of the fuel should the equipment be exposed to a higher ambient temperature.

   In an overfilling situation, additional precautions are necessary to ensure that the situation is handled in a safe manner.

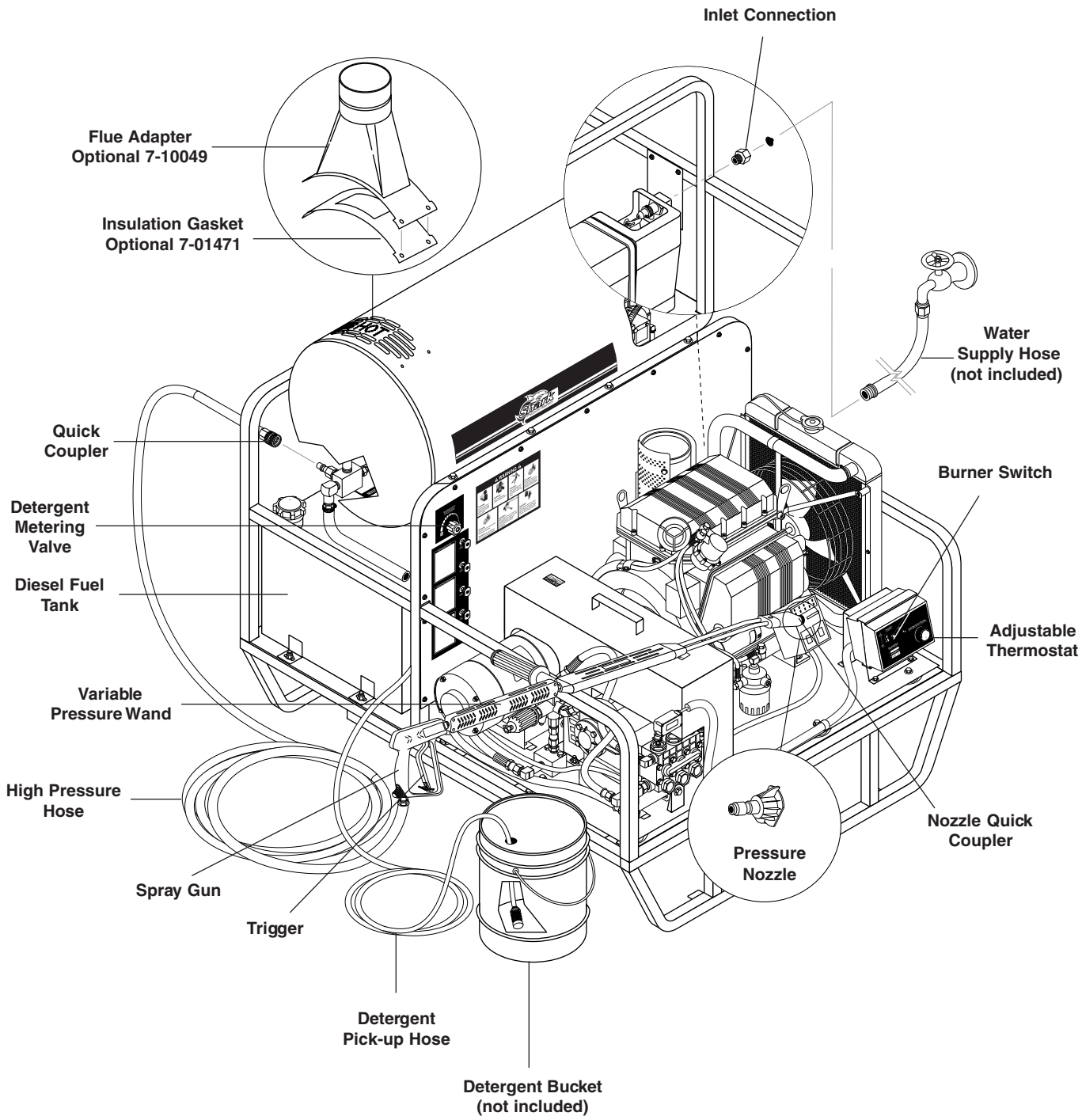
***WARNING: Risk of explosion – do not spray flammable liquids.***

7. Do not place machine near flammable objects as the engine is hot.

***WARNING: Risk of injection or severe injury to persons - Keep clear of nozzle - Do not touch or direct discharge stream at persons. This machine is to be used only by trained operators.***

***CAUTION: Hot discharge fluid. Do not touch or direct discharge stream at persons.***

## COMPONENT IDENTIFICATION



8. High pressure developed by these machines will cause personal injury or equipment damage. Use caution when operating. Do not direct discharge stream at people, or severe injury or death will result.

***WARNING: High pressure spray can cause paint chips or other particles to become airborne and fly at high speeds.***

9. Eye safety devices, safety clothing and foot protection must be worn when using this equipment.
10. Never make adjustments on machine while it is in operation.

***WARNING: Spray gun kicks back. Hold with both hands.***

11. Grip cleaning wand securely with both hands before starting the cleaner. Failure to do this could result in injury from a whipping wand.
12. Machines with spray gun should not be operated with the spray gun in the off position for extensive periods of time as this may cause damage to the pump.
13. The best insurance against an accident is precaution and knowledge of the machine.
14. Shark will not be liable for any changes made to our standard machines, or any components not purchased from Shark.

***WARNING: Keep wand, hose and water spray away from electrical wiring or fatal electric shock may result.***

15. Read engine safety instructions provided.
16. Never run pump dry or leave spray gun closed longer than 2 minutes.
17. Inlet water must be cold and clean fresh water.
18. Use No. 1 or No. 2 Heating Oil (ASTM D306) only. **NEVER** use gasoline in your fuel oil tank. Gasoline is more combustible than fuel oil and could result in a serious explosion. **NEVER** use crankcase or waste oil in your burner. Fuel unit malfunction could result from contamination.
19. Protect machine from freezing.
20. Be certain all quick coupler fittings are secured before using pressure washer.
21. Do not allow acids, caustic, or abrasive fluids to pass through the pump.
22. To reduce the risk of injury, close supervision is necessary when a product is used near children. Do not allow children to operate the pressure washer. **This machine must be attended during operation.**
23. Do not operate this product when fatigued or under the influence of alcohol or drugs. Keep operating area clear of all persons.
24. Protect discharge hose from vehicle traffic and sharp objects. Inspect condition of high pressure hose before using or bodily injury may result.
25. Before disconnecting discharge hose from water outlet, turn burner off and open spray gun to allow water to cool below 100°F before stopping the machine. Then open the spray gun to relieve pressure. Failure to properly cool down or maintain the heating coil may result in a steam explosion.
26. Shark will not be liable for any changes made to our standard machines or any components not purchased from Shark.
27. Do not overreach or stand on unstable support. Keep good footing and balance at all times.
28. This machine must be attended during operation.
29. ***CAUTION: Risk of injury. Disconnect battery ground terminal before servicing.***

# PRE-OPERATION CHECK

- ❑ Pump oil (SAE 30W non-detergent oil, General)
- ❑ Cold water supply (6 gpm • 5/8" • 3/4" preferred • 20 psi)
- ❑ Hose, wand, nozzle (nozzle size per serial plate)
- ❑ Water filter (intact, non restrictive)
- ❑ Engine fuel (No. 1 home heating fuel or diesel)
- ❑ Engine oil (SAE 10W30)
- ❑ Burner fuel (No. 1 home heating fuel or diesel)

# SET-UP PROCEDURES

**This machine is intended for outdoor use only. Machine must be stored indoors when not in use.**

1. Attach a 5/8" water supply hose to inlet connector. Minimum flow should be 6 or 10 gpm depending on model of machine.
2. Attach high pressure hose to discharge nipple using quick coupler. Lock coupler securely into place by pulling back coupler collar and inserting it into discharge nipple, then pushing collar forward to lock in place.
3. Attach wand to spray gun using teflon tape on threads to prevent leakage.
4. Attach swivel connector on discharge hose to spray gun using teflon tape on threads.

5. Check engine and pump oil level by removing oil dipstick, making sure oil is on proper indicator marking. Oil should be visible one half way up sight glass.
6. Fill 20 gallon diesel fuel tank.
7. Install proper battery making sure that the red cable is attached to the positive terminal. Use a 12V Group 24 battery.

## OPERATING INSTRUCTIONS

1. Read engine warning and operating instructions.
2. Turn on water at faucet. Check for water leaks; tighten as needed.
3. Pull wand coupler collar back and insert desired pressure nozzle into wand coupler then secure by pushing coupler collar forward.
4. Pull spray gun trigger to relieve pressure. Read engine manual provided. Turn engine switch to ON position. Wait 5 to 15 seconds until glow plug light (on engine control box) goes out, then turn to the START position and hold it there until the engine starts. **NOTE:** Do not engage electric starter for more than five (5) seconds at a time. If engine fails to start, release the switch, pull spray gun trigger to relieve pressure and wait ten seconds before operating the start again. When the engine starts, allow the engine switch to return to the ON position.
5. With the spray nozzle pointed away from you or anybody else, press the trigger on the spray gun to obtain pressurized cold water spray.
6. For hot water, turn the burner switch to ON when a steady stream of water flows out of the spray gun. Burner will now light automatically.

   **NOTE:** Do not start machine with burner switch on.
7. To apply detergent, place detergent pick-up tube into a container of detergent and turn the detergent valve counterclockwise (see page 8).

## GENERAL WASHING TECHNIQUES

1. Hold spray nozzle approximately one foot from the surface being cleaned. Spray at an angle to get under the material and lift it off.
2. When detergent is required for cleaning, start washing from the bottom and work up. Better detergent economy and faster results will be obtained by allowing the detergent to set 5-10 minutes. After washing, rinse from the top down.
3. Cleaning heavy dirt or material away with a hard stream of clear water is recommended before using a cleaning agent.

## SHUT DOWN PROCEDURES

1. Rinse all detergent lines with clean water, to remove any soap residue.
2. Turn burner switch off and continue spraying, allowing the water to cool to below 100°F.
3. Turn engine key switch off.
4. Turn off water supply.
5. Squeeze trigger on spray gun to relieve remaining pressure.
6. Remove water supply hose.
7. In freezing conditions, disconnect water, drain float tank and add a 50/50 mixture of anti-freeze. Start the machine and squeeze trigger on spray gun to allow the mixture to flow out of the wand. Now turn off the engine. Disconnect all hoses to allow water to drain. See winterizing procedure under Maintenance and Service.

***CAUTION: Do not allow pump to run longer than 2 minutes without water.***

***With machine off, open spray gun to release pressure before removing discharge hose.***

# HOW TO USE THE STANDARD DETERGENT INJECTOR

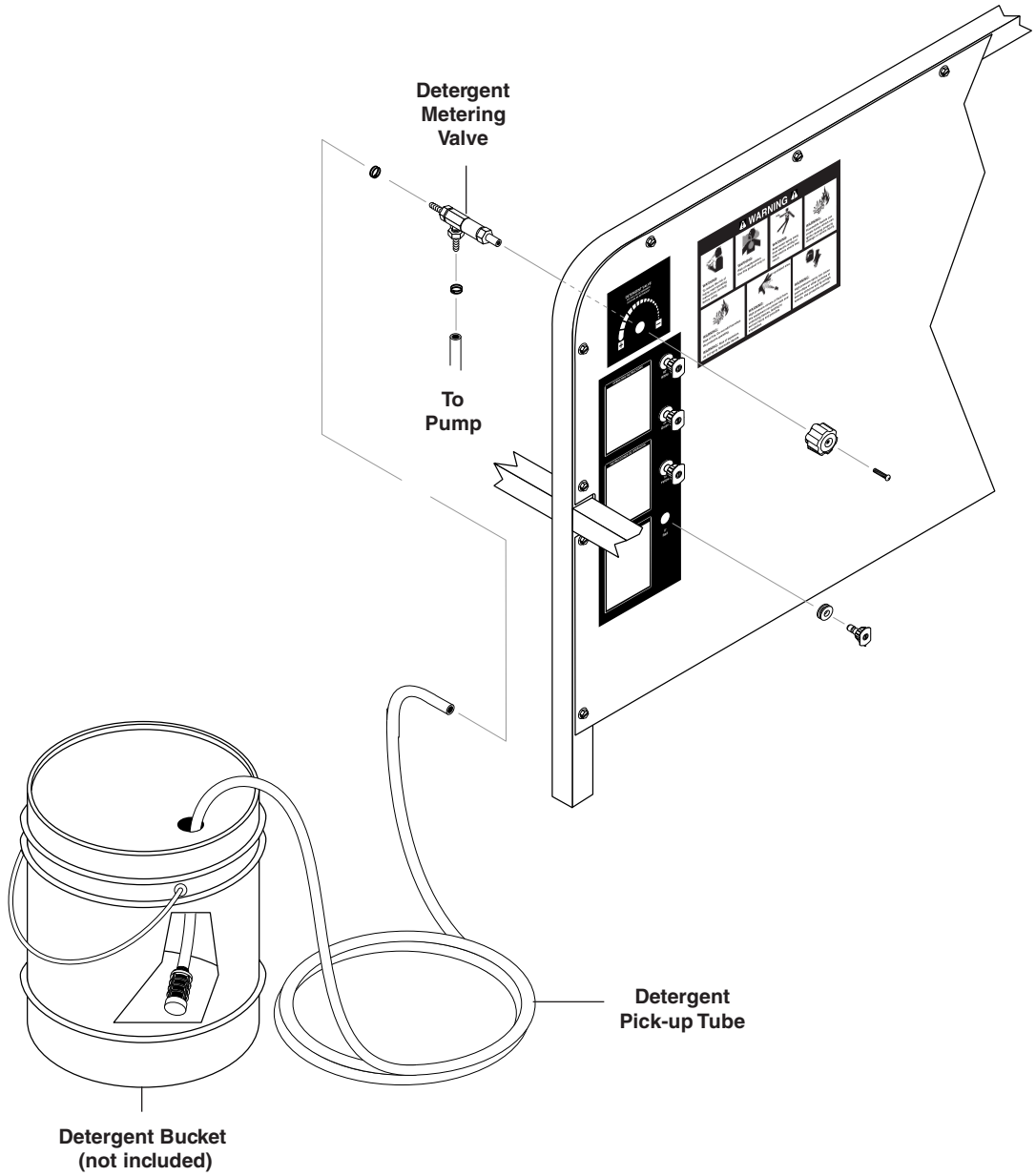
**⚠ WARNING**

**RISK OF ASPHYXIATION. USE THIS PRODUCT ONLY IN A WELL VENTILATED AREA.**

***WARNING: Some detergents may be harmful if inhaled or ingested, causing severe nausea, fainting or poisoning. The harmful elements may cause property damage or severe injury.***

The machine can siphon and mix detergents with the use of Shark's detergent injector kit.

1. Start machine as outlined in Operating Instructions.
2. Place detergent pick-up tube into container of detergent.
3. Adjust the metering valve to desired detergent concentration.
4. When you finish washing, rinse by simply turning the metering valve clockwise.
5. For clean up, place detergent pick-up tube into container of clear water and turn the metering valve counterclockwise. Pull the trigger on the spray gun for 2 minutes.



# PREVENTATIVE MAINTENANCE

1. Check to see that water pump is properly lubricated.
2. Follow winterizing instructions to prevent freeze damage to pump and coils.
3. Always neutralize and flush detergent from system after use.
4. If water is known to have high mineral content, use a water softener in your water system, or de-scale as needed.
5. Do not allow acidic, caustic or abrasive fluids to be pumped through system.
6. Always use high grade quality cleaning products.
7. Never run pump dry for extended periods of time.
8. Use clean fuel: kerosene, No. 1 fuel oil, or diesel. Clean or replace fuel filter every 100 hours of operation. Avoid water contaminated fuel as it will damage the fuel pump.
9. If machine is operated with smoky or eye burning exhaust, coils will soot up, not letting water reach maximum operating temperature.
10. Never allow water to be sprayed on or near the engine or burner assembly or any electrical component.
11. Periodically delime coils as per instructions.
12. Check to see that engine is properly lubricated.

It is advisable, periodically, to visually inspect the burner. Check air inlet to make sure it is not clogged or blocked. Wipe off any oil spills and keep equipment clean and dry.

The flow of combustion and ventilating air to the burner must not be blocked or obstructed in any manner.

The area around the TUFF washer should be kept clean and free of combustible materials, gasoline and other flammable vapors and liquids.

# MAINTENANCE AND SERVICE

## Unloader Valves:

Unloader valves are preset and tested at the factory before shipping. Occasional adjustment of the unloader may be necessary to maintain correct pressure.

## Winterizing Procedure:

Damage due to freezing is not covered by warranty. Adhere to the following cold weather procedures whenever the washer must be stored or operated outdoors under freezing conditions.

During winter months, when temperatures drop below 32°F, protecting your machine against freezing is necessary. Store the machine in a heated room. If this is not possible then mix a 50/50 solution of anti-freeze and water in the float tank. Turn the engine on to siphon the anti-freeze mixture through the machine. If compressed air is available, an air fitting can be screwed into the float tank by removing the float tank strainer and fitting. Then inject the compressed air. Water will be blown out of the machine when the trigger on the spray gun is opened.

## High Limit Hot Water Thermostat:

For safety, each machine is equipped with a temperature sensitive high limit control switch. In the event that the water should exceed its operating temperature, the high limit control will turn the burner off until the water cools, then it will automatically reset itself. The thermostat sensor is located on the discharge side of the heating coil. The thermostat control dial is located on the control panel.

## Pumps:

Use only SAE 30 weight non-detergent oil. Change oil after first 50 hours of use. Thereafter, change oil every three months or at 500 hour intervals. Oil level should be checked through use of dipstick found on top of pump, or the red dot visible through the oil gauge window. Oil should be maintained at that level.

## Cleaning of Coils:

In alkaline water areas, lime deposits can accumulate rapidly inside the heating coil. This growth is increased by the extreme heat build up in the coil. The best preventative for liming conditions is to use high quality cleaning detergents. In areas where alkaline water is an extreme problem, periodic use of Deliming Powder (Part #9-028008) will remove lime and other deposits before coil becomes plugged. (See Deliming instructions for use of Deliming Powder.)

## Deliming Coils:

Periodic flushing of coils or optional float tank is recommended.

Step 1 Fill a container with 4 gallons of water, then add 1 lb. of deliming powder. Mix thoroughly. Pour mixture into float tank.

Step 2 Remove wand assembly from spray gun and put spray gun into float tank. Secure the trigger on the spray gun into the open position.

Step 3 Turn engine on, allowing solution to be pumped through coils back into the float tank. The solution should be allowed to circulate 2-4 hours or until the color changes.

Step 4 After circulating solution, flush the entire system with fresh water. Clean out float tank and then reinstall wand assembly to spray gun.

## Removal of Soot from Heating Coil:

In the heating process, fuel residue in the form of soot deposits may develop between the heating coil pipes, and block air flow which will affect burner combustion. When soot has been detected on visual observation, the soot on the coil must be washed off after following the coil removal steps (See Coil Removal on page 11).

## Rupture Disk:

If pressure from pump or thermal expansion should exceed safe limits, the rupture disk will burst allowing high pressure to be discharged through hose to ground. When disk ruptures it will need to be replaced.

## Fuel:

Use clean fuel oil that is not contaminated with water and debris. Replace fuel filter and drain the tank every 100 hours of operation.

Use No.1 or No 2 Heating Oil (ASTM D306) only. NEVER use gasoline in your diesel fuel tank. Gasoline is more combustible than fuel oil and could result in a serious explosion. **NEVER** use crankcase or waste oil in your burner. Fuel unit malfunction could result from contamination.

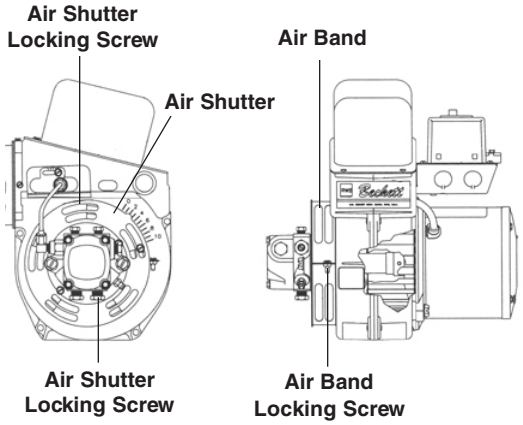
## Fuel Control System:

This machine utilizes a fuel solenoid valve located on the fuel pump to control the flow of fuel to the combustion chamber. The solenoid, which is normally closed, is activated by a flow switch when water flows through it. When the operator releases the trigger on the spray gun, the flow of water through the flow switch stops, turning off the electrical current to the fuel solenoid.

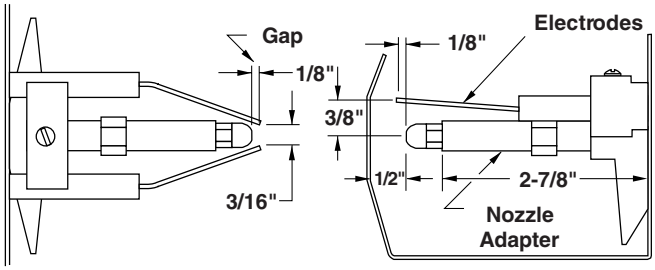
The solenoid then closes, shutting off the supply of fuel to the combustion chamber. Controlling the flow of fuel in this way gives an instantaneous burn-or-no-burn situation, thereby eliminating high and low water temperatures and the combustion smoke normally associated with machines incorporating a spray gun. Periodic inspection, to insure that the fuel solenoid valve functions properly, is recommended. This can be done by operating the machine and checking to see that the burner is not firing when the spray gun is in the OFF position.

## Fuel Pressure Adjustment:

To control water temperature, adjust fuel pressure by turning the regulating pressure adjusting screw clockwise to increase, counterclockwise to decrease. Do not exceed 200 psi. **NOTE**: When changing fuel pump, a bypass plug must be installed in return port or fuel pump will not prime.

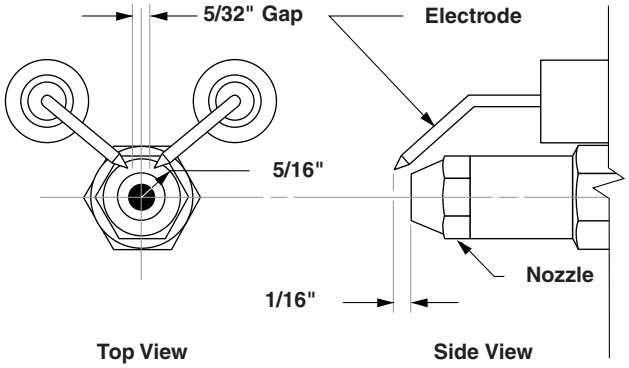



## Electrode Setting: Wayne




**Periodically Check Wiring Connections. If Necessary To Adjust Electrodes, Use Diagram.**

## Electrode Setting: Beckett




## Burner Nozzle:

Keep the tip free of surface deposits by wiping it with a clean, solvent saturated cloth, being careful not to plug or enlarge the nozzle. For maximum efficiency, replace the nozzle each season.

## Air Adjustment:

Machines are preset and performance tested at the factory - elevation 100'. A one-time initial correction for your location will pay off in economy, performance, and extended service life. If a smoky or eye-burning exhaust is being emitted from the stack, two things should be checked. First, check the fuel to be certain that kerosene or No. 1 home heating fuel is being used. Next, check the air adjustment on the burner.

**To adjust:** start machine and turn burner ON. Loosen two locking screws found in the air shutter openings (refer to illustration) and close air shutter until black smoke appears from burner exhaust vent. Note air band position. Next, slowly open the air shutter until white smoke just starts to appear. Turn air shutter halfway back to the black smoke position previously noted. Tighten locking screws.

If the desired position cannot be obtained using only the air shutter, lock the air shutter in as close a position as can be obtained, then repeat the above procedure on the air band setting.

## Coil Removal:

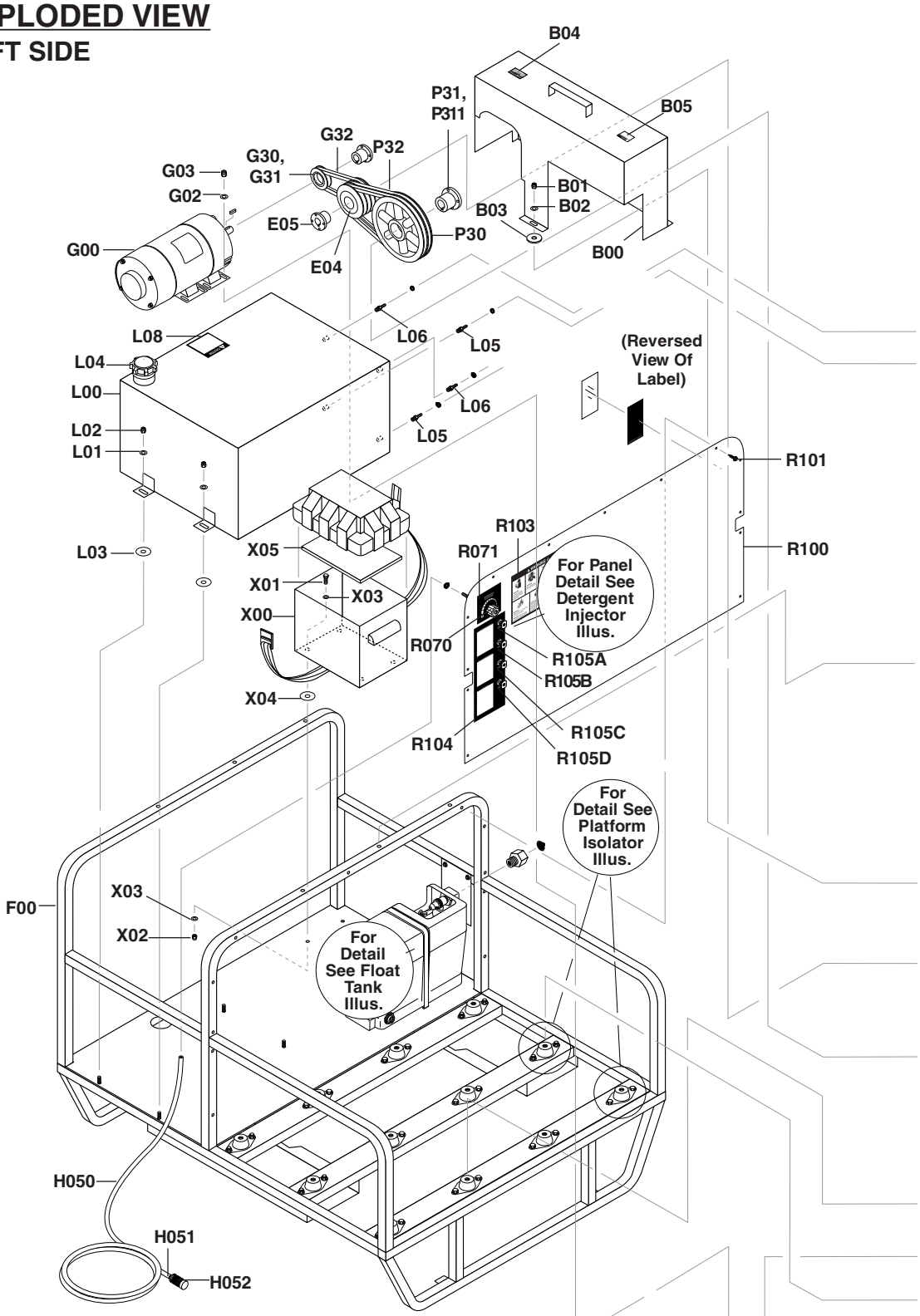
Removal of coil because of freeze breakage, or to clean soot from it can be done quickly and easily.

1. Disconnect hose from pump to inlet side of the coil.
2. Carefully disconnect the thermostat sensor making sure you do not crimp the capillary tube.
3. Remove burner assembly from combustion chamber.
4. Remove the 3-3/8" bolts from each side of coil and tank assembly (these bolts are used to fasten tank to chassis).
5. Remove fittings connected to the 1/2" pipe nipples from inlet and discharge sides of coil.
6. Remove top tank wrap, bend back insulation tabs and fold back blanket.
7. Remove bolts that hold down coil to bottom wrap.
8. Remove coil.
9. Replace or repair any insulation found to be torn or broken.
10. Remove insulation retainer plates.

## Coil Reinstallation:

Reinstall new or cleaned coil reversing Steps 9 through 1.

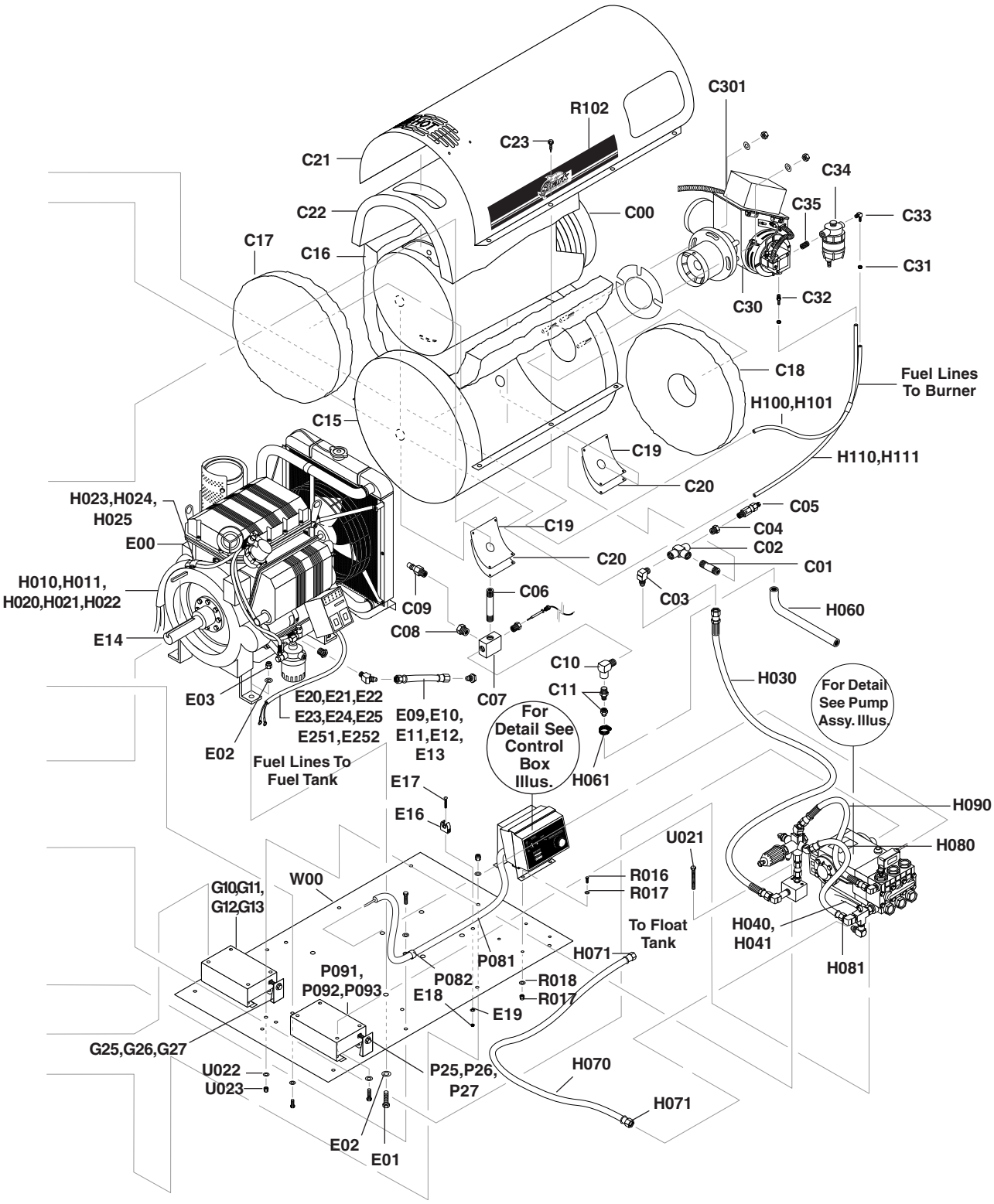
## EXPLODED VIEW
### LEFT SIDE




**LEGEND**

| | | | |
|---|---|---|---|
| G = Generator | L = Fuel Tank | B = Beltguard | U = Unloader |
| R = Controls | F = Frame | H = Hose | P = Pump |
| E = Engine | X = Battery Box | W= Power Platform | C = Coil |
| N = Final Assembly | T = Float Tank | | |

## EXPLODED VIEW
### RIGHT SIDE



## EXPLODED VIEW - PARTS LIST

12VDC Models: 503067E, 503061E

120VAC Models: 503067E/G, 503061E/G

**LEGEND**

G = Generator
R = Controls
E = Engine
N = Final Assembly
L = Fuel Tank
F = Frame
X = Battery Box
T = Float Tank
B = Beltguard
H = Hose
W= Power Platform
U = Unloader
P = Pump
C = Coil

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| B00 | 95-07200077 | Belt Guard, Diesel SS (503061E/G, 503067E/G) | 1 |
| | 95-07200080 | Belt Guard, 12VDC Diesel SS (503067E, 503061E) | 1 |
| B01 | 90-2002 | Nut, 3/8" ESNA, NC | 3 |
| B02 | 90-4002 | Washer, 3/8", SAE, Flat | 3 |
| B03 | 2-0108 | Bumper Pad, Engine | 2 |
| B04 | 10-02025A | Label, Hot/Caliente w/Arrows Warning | 1 |
| B05 | 10-02028 | Label, Warning-Exposed Pulleys | 1 |
| C00 | 95-07200055 | Coil, Rodless | 1 |
| C01 | 2-000891 | Nipple, 1/2" x 2-1/2", Galv. SCH 80 | 1 |
| C02 | 2-0036 | Tee, 1/2" Female, Steel Pipe | 1 |
| C03 | 2-0054 | Elbow, 1/2" JIC, 1/2", 90° | 1 |
| C04 | 2-00681 | Bushing, 1/2" x 3/8", Steel | 1 |
| C05 | 2-3245 | Valve, Safety Relief, 4500 PSI | 1 |
| C06 | 2-00101 | Nipple, 1/2" x 4", Galv. SCH 80 | 1 |
| C07 | 95-07101226 | Block, Discharge, Brass, 1/2" x 1/2" | 1 |
| C08 | 2-00681 | Bushing, 1/2" x 3/8", Steel | 1 |
| C09 | 2-2007 | Nipple, 3/8" x 3/8" NPT ST Male | 1 |
| C10 | 2-0032 | Elbow, 1/2", Street | 1 |
| C11 | 2-3408 | Disk, Rupture Assy, 8000 PSI | 1 |
| C15 | 95-07200012 | Weldment, Bottom Wrap, SS | 1 |
| C16 | 7-01430 | Insulation, Blanket, No Foil | 1 |
| C17 | 7-0140 | Insulation, Front Head, No Hole | 1 |
| C18 | 7-0141 | Insulation, Burner Head, w/Hole | 1 |
| C19 | 7-0144 | Gasket, Burner Plate | 2 |
| C20 | 95-07121113 | Insulation Retainer | 2 |
| C201 | 90-2990 | ▲ Screw, SS #10 HH Tek | 8 |
| C21 | 95-07200010 | Top Wrap, SS | 1 |
| C211 | 90-40021 | ▲ Washer, 3/8", SAE, SS | 4 |
| C22 | 7-01484 | Insulation/Blanket, Die-Cut 28 | 1 |
| C23 | 90-19959 | Screw, 3/8" x 1" HX Wash Head | 8 |
| C30 | Burner Assembly, See Burner Spec's Page 23 | | |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| C301 | 6-0516 | Strain Relief, 1/2" Metal, Two Screw | 1 |
| C31 | 2-9040 | Clamp, Hose, 1/4" | 4 |
| C32 | 2-10893 | Hose Barb, 1/4" Barb x 1/4" ML Pipe | 1 |
| C33 | 2-1089 | Hose Barb, 1/4" Barb x 1/4" Pipe, 90° | 1 |
| C34 | 2-99050 | Filter, Fuel, Water Separator | 1 |
| C35 | 2-1003 | Nipple, 1/4" Hex | 1 |
| E00 | 5-0405 | Engine, Lombardini Diesel, 15 HP | 1 |
| E001 | 10-02012 | ▲ Label, Oiled | 1 |
| E01 | 90-101810 | Bolt, 3/8" x 1-1/2", HH NC GRD 8, Zinc | 4 |
| E02 | 90-4002 | Washer, 3/8", SAE, Flat | 9 |
| E03 | 90-2002 | Nut, 3/8" ESNA, NC | 4 |
| E04 | 5-407034 | Pulley, 3TB34 | 1 |
| E05 | 5-531114 | Bushing, P2 x 1-1/2" | 1 |
| E051 | 90-1007 | Bolt, 5/16" x 1", NC HH | 3 |
| E09 | 2-11065 | Adapter, M18-1.5" x 3/8" FNPT | 1 |
| E10 | 2-0051 | Nipple, 1/2" JIC, 3/8" FNPT | 1 |
| E11 | 4-02100000 | Hose, 1/2" Push-On | 2 ft |
| E12 | 2-1105 | Swivel, 1/2" Fem, Push-On | 2 |
| E13 | 2-1050 | Plug, 1/2" JIC, Flare, 639F-8 | 1 |
| E14 | 74-9997832 | Shaft, Lombardini LDW602/903 | 1 |
| E15 | 74-9170104 | ▲ Deflector, Exhaust | 1 |
| E16 | 2-9013 | Clamp, 1/2" Ro-Clip, Kleinhuis | 1 |
| E17 | 90-1994 | Screw, 10/32" x 1-1/4" RH, SL, Blk | 1 |
| E18 | 90-017 | Nut, 10/32" KEPS | 1 |
| E19 | 90-4000 | Washer, 1/4", Flat, SAE | 1 |
| E20 | 6-0117 | Wire, THWN, 6 GA, Red | 6.7ft |
| E21 | 6-0118 | Wire, THWN, 6 GA, Black | 5.8ft |
| E22 | 6-0503 | Terminal, Ring Tongue | 2 |
| E23 | 6-05030 | Terminal, Ring Tongue | 2 |
| E24 | 6-05101 | Connector, Battery Post | 2 |
| E25 | 7-0139 | Insulation, Fiber Sleeving, 1/2" | 3.5ft |
| E251 | 2-9016 | Clamp, Round, 0.56 ID | 3 |
| E252 | 90-300210 | Screw, #14 x 1", TEK, Blk., Zinc | 3 |

## EXPLODED VIEW - PARTS LIST

12VDC Models: 503067E, 503061E

120VAC Models: 503067E/G, 503061E/G

**LEGEND**

G = Generator
R = Controls
E = Engine
N = Final Assembly
L = Fuel Tank
F = Frame
X = Battery Box
T = Float Tank
B = Beltguard
H = Hose
W= Power Platform
U = Unloader
P = Pump
C = Coil

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| E26 | 74-5000004 | ▲ Kit, Pressure Switch, Oil Dual Port (503061E, 503067E) | 1 |
| F00 | 95-07200075 | Frame Assy, Diesel | 1 |
| G00 | 6-0601 | Generator, 2FSM2PC-1/A, WINC (503061E/G, 503067E/G) | 1 |
| G01 | 90-1016 | ▲ Bolt, 3/8" x 1", NC HH (503061E/G, 503067E/G) | 4 |
| G02 | 90-4002 | Washer, 3/8", SAE, Flat (503061E/G, 503067E/G) | 8 |
| G03 | 90-2002 | Nut, 3/8", ESNA, NC (503061E/G, 503067E/G) | 4 |
| G10 | 95-07200009 | Weldment, Pump/Gen. Rail (503061E/G, 503067E/G) | 1 |
| G11 | 90-1016 | ▲ Bolt, 3/8" x 1", NC HH (503061E/G, 503067E/G) | 3 |
| G12 | 2-011981 | ▲ Washer, Snubbing (503061E/G, 503067E/G) | 3 |
| G13 | 90-4009 | ▲ Washer, 3/8", Lock, Split Ring (503061E/G, 503067E/G) | 3 |
| G25 | 90-10220 | Bolt, 3/8" x 3-1/2", TAP (503061E/G, 503067E/G) | 1 |
| G26 | 90-4002 | Washer, 3/8", SAE, Flat (503061E/G, 503067E/G) | 4 |
| G27 | 90-2007 | Nut, 3/8", Hex, NC (503061E/G, 503067E/G) | 2 |
| G30 | 5-40403201 | Pulley, BK 32 H (503061E/G, 503067E/G) | 1 |
| G31 | 5-511063 | ▲ Bushing, H x 5/8" (503061E/G, 503067E/G) | 1 |
| G32 | 5-604022 | Belt, BX22 Sub#5L250 (503061E/G, 503067E/G) | 1 |
| H010 | 4-02100001 | Hose, 3/16", Push-On, Fuel Line | 4ft |
| H011 | 2-9000 | Clamp, Screw, #4 | 2 |
| H020 | 4-02100000 | Hose, 1/4", Push-On, Fuel Line | 3.3ft |
| H021 | 2-9000 | Clamp, Screw, #4 | 2 |
| H022 | 7-0139 | Insulation, Fiber Sleeving, 1/2" | 2.5ft |
| H023 | 2-9016 | Clamp, Round, 0.56 ID | 1 |
| H024 | 90-1030 | Bolt, 8mm x 16mm Hex Head | 1 |
| H025 | 90-4008 | Washer, 5/16", Lock, Split Ring | 1 |
| H030 | 4-02047762 | Hose, 3/8" X 62", 2 Wire, Pressure | 1 |
| H040 | 4-02090000 | Hose, 1/4" x 1/2", Braided Vinyl | 4ft |
| H041 | 2-9040 | Clamp, Hose, 1/4" | 4 |
| H050 | 4-02080000 | Tube, 1/4" x 1/2", Clear Vinyl | 6ft |
| H051 | 2-9040 | Clamp, Hose, 1/4" | 1 |
| H052 | 2-1905 | Strainer, 1/4", Brass w/Check | 1 |
| H060 | 4-02130050 | Hose, 7/8" Push-On, Conduit, 0.73 | 1ft |
| H061 | 2-90041 | Clamp, Screw, #16 Micro | 1 |
| H070 | 4-02110000 | Hose, 1/2", Push-On | 4ft |
| H071 | 2-1105 | Swivel, 1/2" FJIC, Push-On | 2 |
| H080 | 4-02110000 | Hose, 1/2" Push-On | 1.25ft |
| H081 | 2-1108 | Swivel, 1/2" FJIC, Push-On | 2 |
| H090 | 4-02047716 | Hose, Pressure, 3/8" x 16" | 1 |
| H100 | 4-02100000 | Hose, 1/4", Push-On, Fuel Line | 1.6ft |
| H101 | 2-9000 | Clamp, Screw #4 | 2 |
| H110 | 4-02100000 | Hose, 1/4", Push-On, Fuel Line | 2.1ft |
| H111 | 2-9000 | Clamp, Screw, #4 | 2 |
| L00 | 95-07200081 | Fuel Tank Assy, 20 Gal. MS | 1 |
| L01 | 90-4001 | Washer, 5/16", Flat, SAE | 4 |
| L02 | 90-2001 | Nut, 5/16", ESNA, NC | 4 |
| L03 | 2-0108 | Bumper Pad, Engine | 4 |
| L04 | 2-01153 | Cap, Fuel Tank, Plastic | 1 |
| L05 | 2-1088 | Hose Barb, 1/4" Barb x 1/8" ML Pipe, 90° | 3 |
| L06 | 2-10893 | Hose Barb, 1/8" Barb x 1/8" MPT, 90° | 1 |
| L07 | 2-1046 | ▲ Plug, 1/4" Countersunk | 1 |
| L08 | 10-020110 | Label, Use Only Kerosene | 1 |
| P081 | 7-0139 | Insulated, Fiber Sleeving, 1/2" | 3 ft |
| P082 | 2-9016 | Clamp, Round, 0.56 ID | 2 |
| P091 | 90-1016 | ▲ Bolt, 3/8" x 1", NC HH | 3 |
| P092 | 2-011981 | ▲ Washer, Snubbing | 3 |
| P093 | 90-4009 | ▲ Washer, 3/8" Lock, Split Ring | 3 |
| P25 | 90-10220 | Bolt, 3/8" x 3-1/2", Tap | 1 |
| P26 | 90-4002 | Washer, 3/8", SAE, Flat | 4 |
| P27 | 90-2007 | ▲ Nut, 3/8", Hex, NC | 2 |
| P30 | 5-40510001 | Pulley, 2BK 100 H | 1 |

## EXPLODED VIEW - PARTS LIST

12VDC Models: 503067E, 503061E

120VAC Models: 503067E/G, 503061E/G

**LEGEND**

G = Generator
R = Controls
E = Engine
N = Final Assembly
L = Fuel Tank
F = Frame
X = Battery Box
T = Float Tank
B = Beltguard
H = Hose
W= Power Platform
U = Unloader
P = Pump
C = Coil

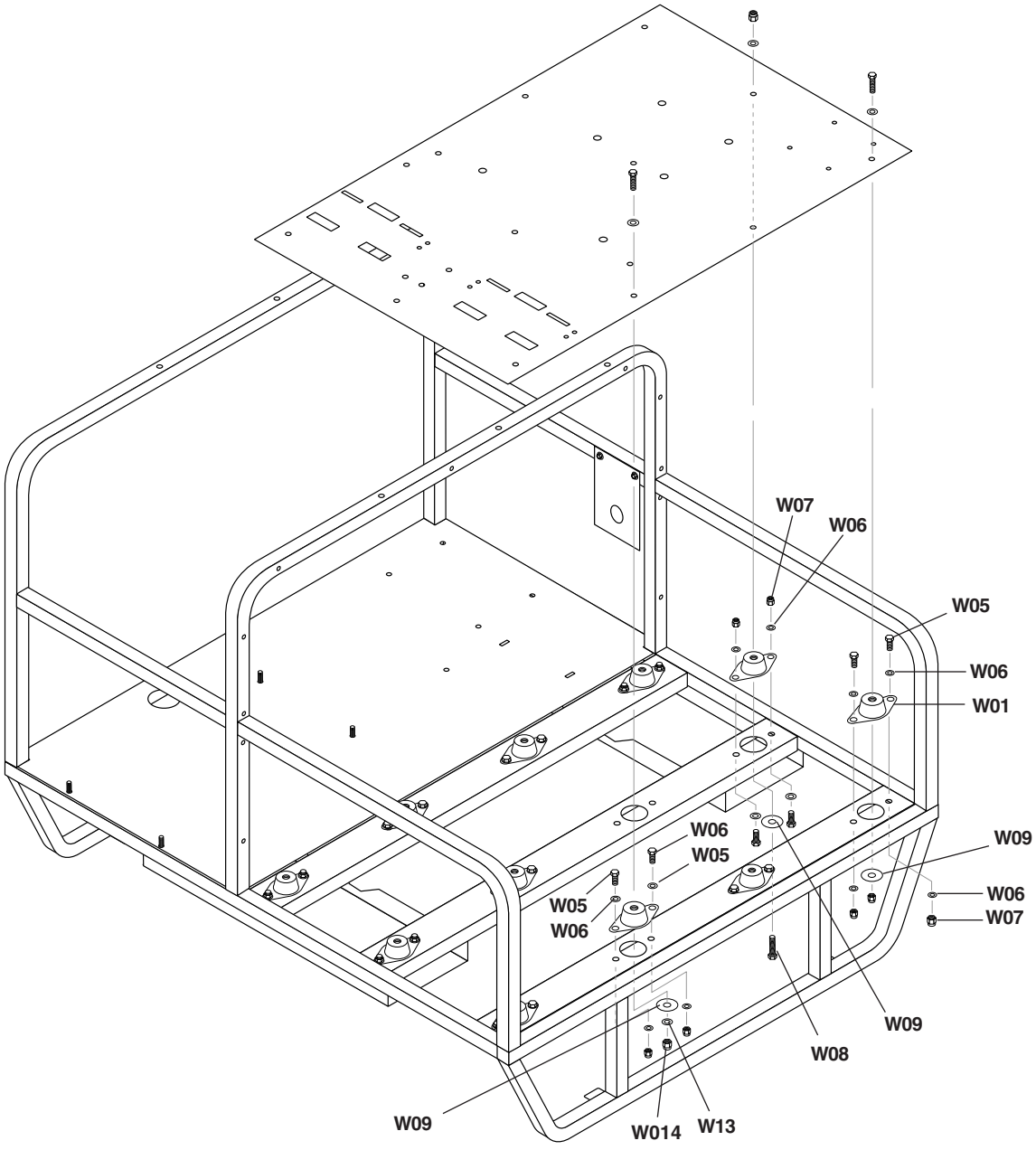
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| P31 | 5-512024 | Bushing, H x 24MM | 1 |
| P311 | 90-1002 | Bolt, 1/4" x 1" Hex Head, Zinc, Grade 5 | 2 |
| P32 | 5-604034 | Belt, BX34 | 2 |
| R016 | 90-1007 | Bolt, 5/16" x 1", NC HH | 4 |
| R017 | 90-2001 | Nut, 5/16", ESNA, NC | 4 |
| R018 | 90-4001 | Washer, 5/16", Flat, SAE | 8 |
| R070 | 2-30152 | Valve, Metering, 1/4" Hose | 1 |
| R071 | 11-0711 | Label, Detergent Valve | 1 |
| R100 | 95-07200073 | Control Panel | 1 |
| R101 | 90-300210 | Screw, #14 x 1", Tek, Blk., Zinc | 13 |
| R102 | 11-0602 | Label, Stripe, 17" | 1 |
| R103 | 11-1043 | Label, Warning, Text | 1 |
| R104 | 11-1044 | Label, Control Panel | 1 |
| R105a | 4-12805000 | Nozzle, SAQCMEG 0005, Red (503061E/G, 503067E/G) | 1 |
| R105b | 4-12805015 | Nozzle, SAQCMEG 1505, Yellow (503061E/G, 503067E/G) | 1 |
| R105c | 4-12805025 | Nozzle, SAQCMEG 2505, Green (503061E/G, 503067E/G) | 1 |
| R105d | 4-12805040 | Nozzle, SAQCMEG 4005, White (503061E/G, 503067E/G) | 1 |
| U021 | 90-10210 | Bolt, 3/8" x 3", GRD 5, Zinc | 2 |
| U022 | 90-4002 | Washer, 3/8", SAE, Flat | 2 |
| U023 | 90-2002 | Nut, 3/8", ESNA, NC | 2 |
| W00 | 95-07200076 | Assy, Power Platform, Diesel | 1 |
| X00 | 2-0115 | Box, Battery, M100 | 1 |
| X01 | 90-1002 | Bolt, 1/4" x 1", Hex Head | 4 |
| X02 | 90-2000 | Nut, 1/4", ESNA, NC | 4 |
| X03 | 90-4000 | Washer, 1/4", Flat, SAE | 8 |
| X04 | 2-0108 | Bumper Pad, Engine | 4 |
| X05 | 2-011500 | Plate, Battery Box, Large, PO | 1 |

▲ Not Shown

# PLATFORM ISOLATOR
## EXPLODED VIEW - PARTS LIST

**LEGEND**

| | | | |
|---|---|---|---|
| G = Generator | L = Fuel Tank | B = Beltguard | U = Unloader |
| R = Controls | F = Frame | H = Hose | P = Pump |
| E = Engine | X = Battery Box | W= Power Platform | C = Coil |
| N = Final Assembly | T = Float Tank | | |



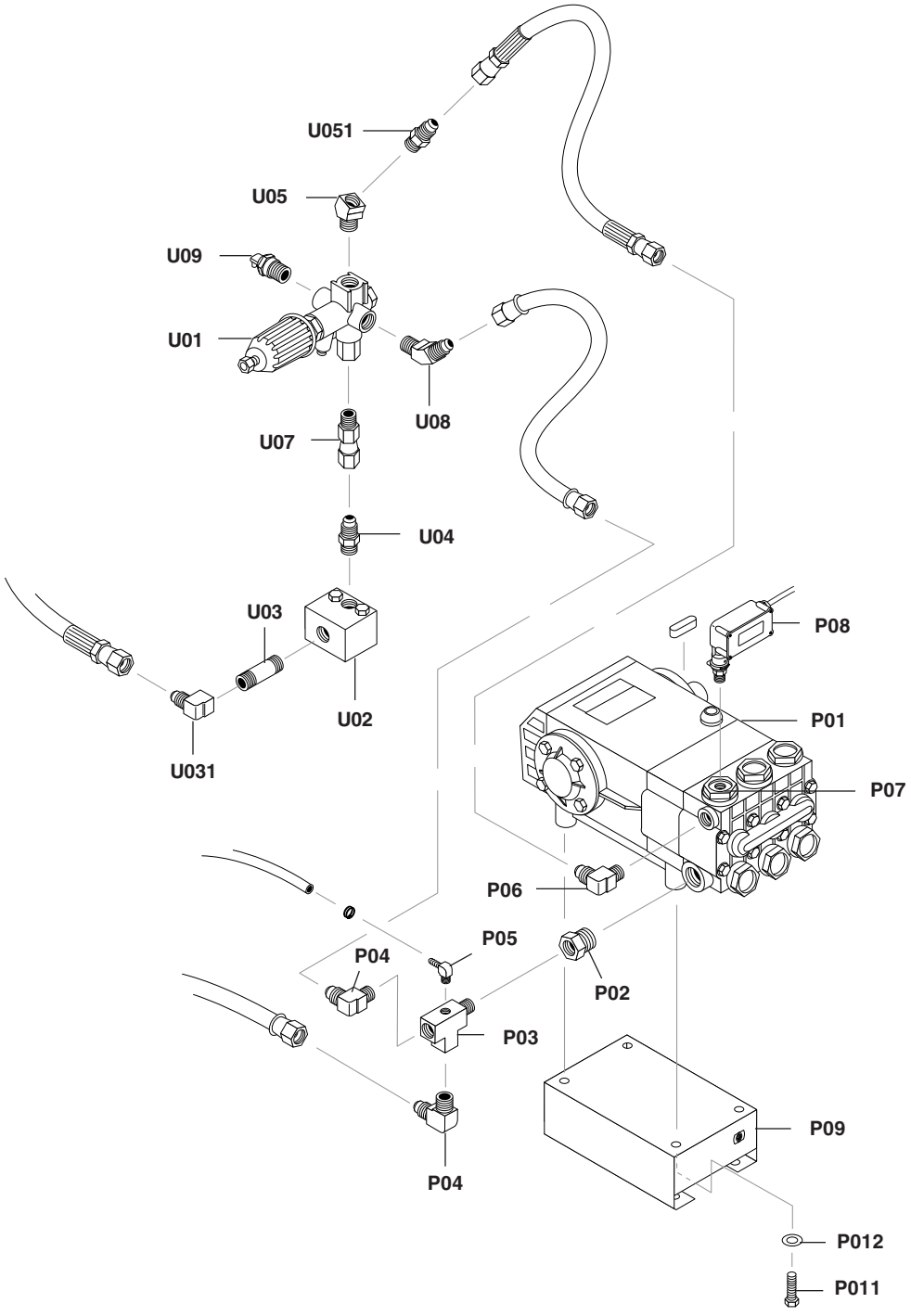

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| W01 | 2-01013 | Isolator, Vibration Mount, 100L | 11 |
| W05 | 90-1007 | Bolt, 5/16" x 1", NC HH | 22 |
| W06 | 90-4001 | Washer, 5/16", Flat, SAE | 44 |
| W07 | 90-2001 | Nut, 5/16", ESNA, NC | 22 |
| W08 | 90-1021 | Bolt, 3/8" x 2-1/2" GR 5 Zinc | 9 |
| W09 | 2-011981 | Washer, Snubbing | 11 |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| W10 | 90-4002 | Washer, 3/8", SAE, Flat | 9 |
| W11 | 90-2002 | Nut, 3/8", ESNA, NC | 9 |
| W12 | 90-1012 | Bolt, 5/16" x 2-1/2", NC HH | 2 |
| W13 | 90-4001 | Washer, 5/16", Flat, SAE | 4 |
| W14 | 90-2001 | Nut, 5/16", ESNA, NC | 2 |

## SSD DIESEL
### PUMP ASSEMBLY

**LEGEND**

| | | | |
|---|---|---|---|
| G = Generator | L = Fuel Tank | B = Beltguard | U = Unloader |
| R = Controls | F = Frame | H = Hose | P = Pump |
| E = Engine | X = Battery Box | W= Power Platform | C = Coil |
| N = Final Assembly | T = Float Tank | | |



# SSD DIESEL
## PUMP ASSEMBLY PARTS LIST

**LEGEND**

| | | | |
|---|---|---|---|
| G = Generator | L = Fuel Tank | B = Beltguard | U = Unloader |
| R = Controls | F = Frame | H = Hose | P = Pump |
| E = Engine | X = Battery Box | W= Power Platform | C = Coil |
| N = Final Assembly | T = Float Tank | | |

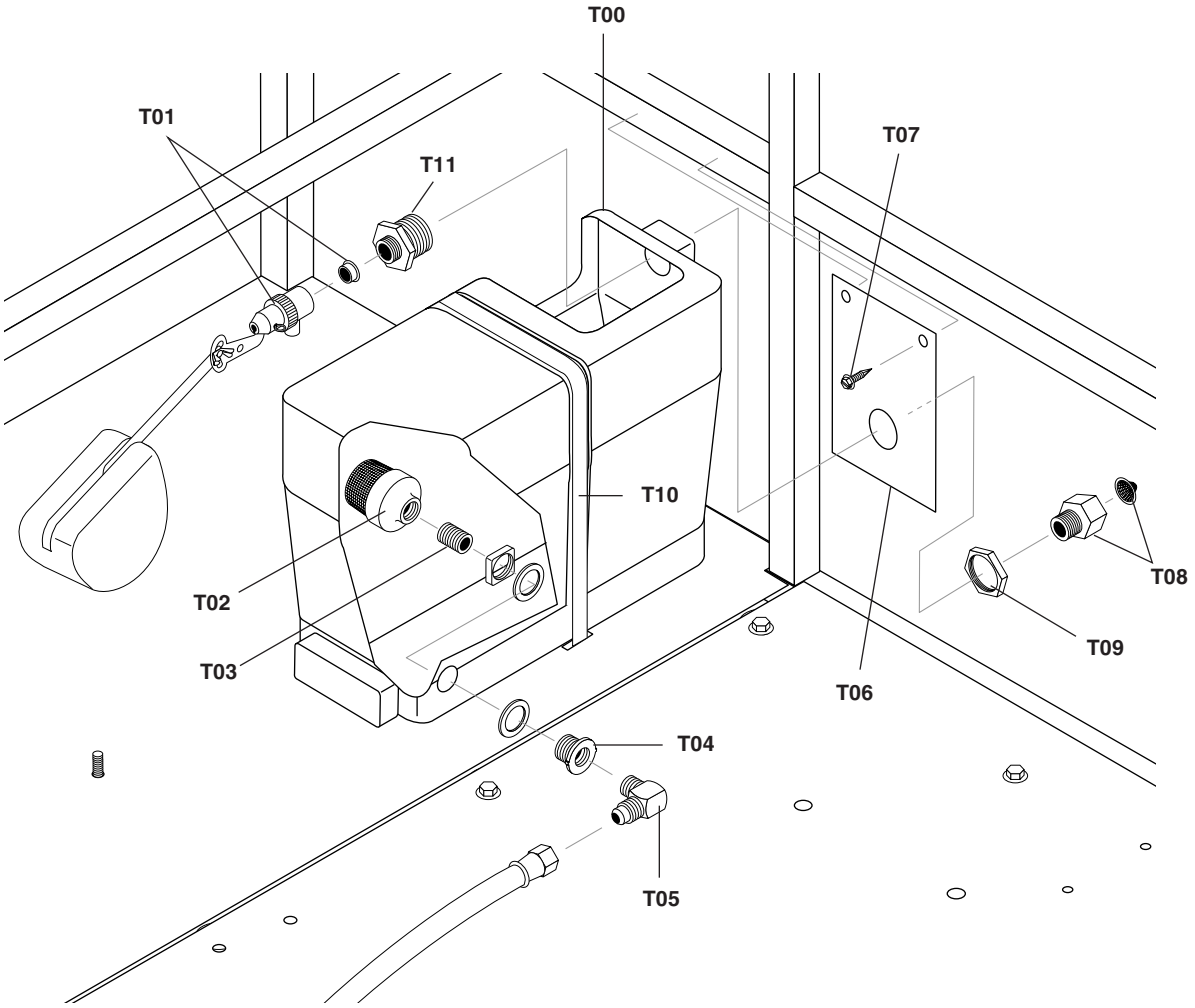
| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| P01 | 5-2307 | General Pump TS-2021 (503061E, 503061E/G) | 1 |
| | 5-1661 | Pump, Legacy TT-3555, 5.5 @ 3500, 1450 RPM (503067E, 503067E/G) | 1 |
| P011 | 1-99364400 | Screw, Pump (503067E, 503067E/G) | 4 |
| P012 | 1-96710600 | Washer, Lock, Pump (503067E, 503067E/G) | 4 |
| P02 | 2-1081 | Bushing, 3/4" x 1/2" Pipe (503067E, 503067E/G) | 1 |
| P03 | 2-10421 | Tee, 1/2" with 1/8" Hole, Street | 1 |
| P04 | 2-1062 | Elbow, 1/2" JIC, 3/8", 90° | 2 |
| P05 | 2-1088 | Hose Barb, 1/4" Barb x 1/8" ML Pipe, 90° | 1 |
| P06 | 2-0053 | Elbow, 1/2" JIC, 3/8", 90° | 1 |
| P07 | 1-190029 | Cap, Valve with 1/4" Gauge Port, T Series (503061E, 503061E/G) | 1 |
| | 15-070042532 | Cap, Valve with 1/4" Gauge Port w/O-Ring (503067E, 503067E/G | 1 |
| P08 | 6-021720 | Switch, Pressure, N/O, 1/4" NPT SS | 1 |
| P09 | 95-07200054 | Weldment, Pump Rail, Wide | 1 |
| U01 | 5-3208 | Unloader, AL-VRT 607, 7.8 GPM @ 4200 PSI | 1 |
| U02 | 95-071012150/B | Block Unloader, 1/2" x 1/2", Brass | 1 |
| U03 | 2-000891 | Nipple, 1/2" x 2-1/2", Galv. SCH 80 | 1 |
| U031 | 2-00602 | Elbow, 1/2" FNPT x 1/2" MJIC | 1 |
| U04 | 2-0052 | Nipple, 1/2" JIC, 1/2" Pipe | 1 |
| U05 | 2-00575 | Elbow, 3/8", Street, 45° | 1 |
| U051 | 2-0051 | Nipple, 1/2" MJIC x 3/8" NPT | 1 |
| U07 | 2-0079 | Swivel, 1/2" JIC Fem, 3/8" MAL | 1 |
| U08 | 2-106301 | Elbow, 1/2" JIC x 3/8", 45° | 1 |
| U09 | 2-300816 | Pump Protector, 3/8" PTP | 1 |

## SSD FLOAT TANK ASSEMBLY & PARTS LIST

### EXPLODED VIEW

**LEGEND**

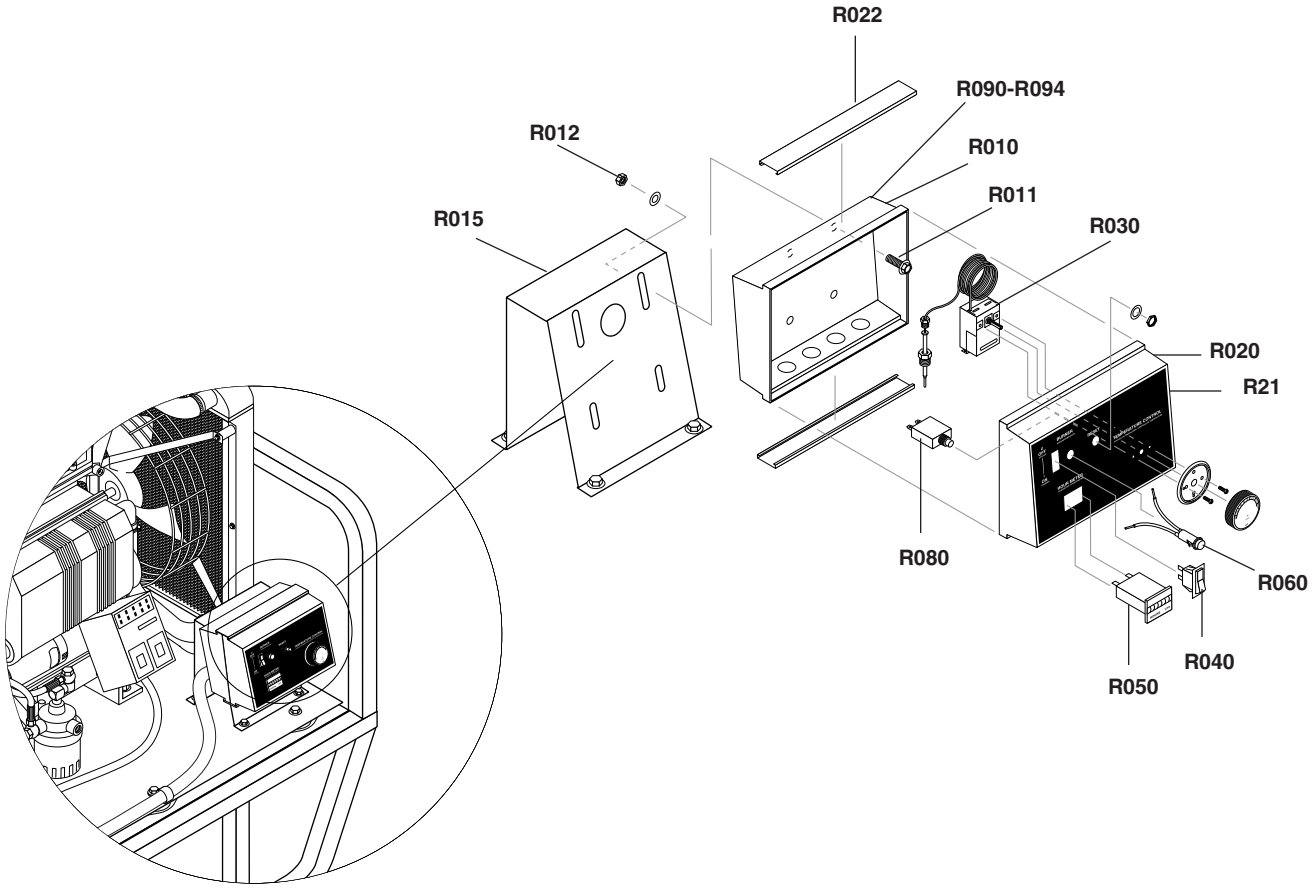
| | | | |
|---|---|---|---|
| G = Generator | L = Fuel Tank | B = Beltguard | U = Unloader |
| R = Controls | F = Frame | H = Hose | P = Pump |
| E = Engine | X = Battery Box | W= Power Platform | C = Coil |
| N = Final Assembly | | | |




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| T00 | 2-01164100 | Tank, Float, 2-1/2 Gal., Blank | 1 |
| T01 | 2-30123 | Valve, Float Brass, | 1 |
| T02 | 2-1906 | Strainer, 1/2" Basket | 1 |
| T03 | 2-1006 | Nipple, 1/2" Close | 1 |
| T04 | 2-010049 | Bulkhead, 1/2" PVC | 1 |
| T05 | 2-1062 | Elbow, 1/2" JIC x 1/2", 90° | 1 |
| T06 | 95-07200014 | Support Plate, Float Tank | 1 |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| T07 | 90-300210 | Screw, #14 x 1", TEK, Blk, Zinc | 2 |
| T08 | 2-10943 | Swivel, 3/8" MP x 3/4" GHF w/Strainer | 1 |
| T09 | 2-301232 | Nut, 1", Adapter, Float Valve | 1 |
| T10 | 6-05134 | Cable, TY, 48" | 1 |
| T11 | 2-301231 | Adapter, Float Valve | 1 |

## SSD CONTROL BOX
### EXPLODED VIEW

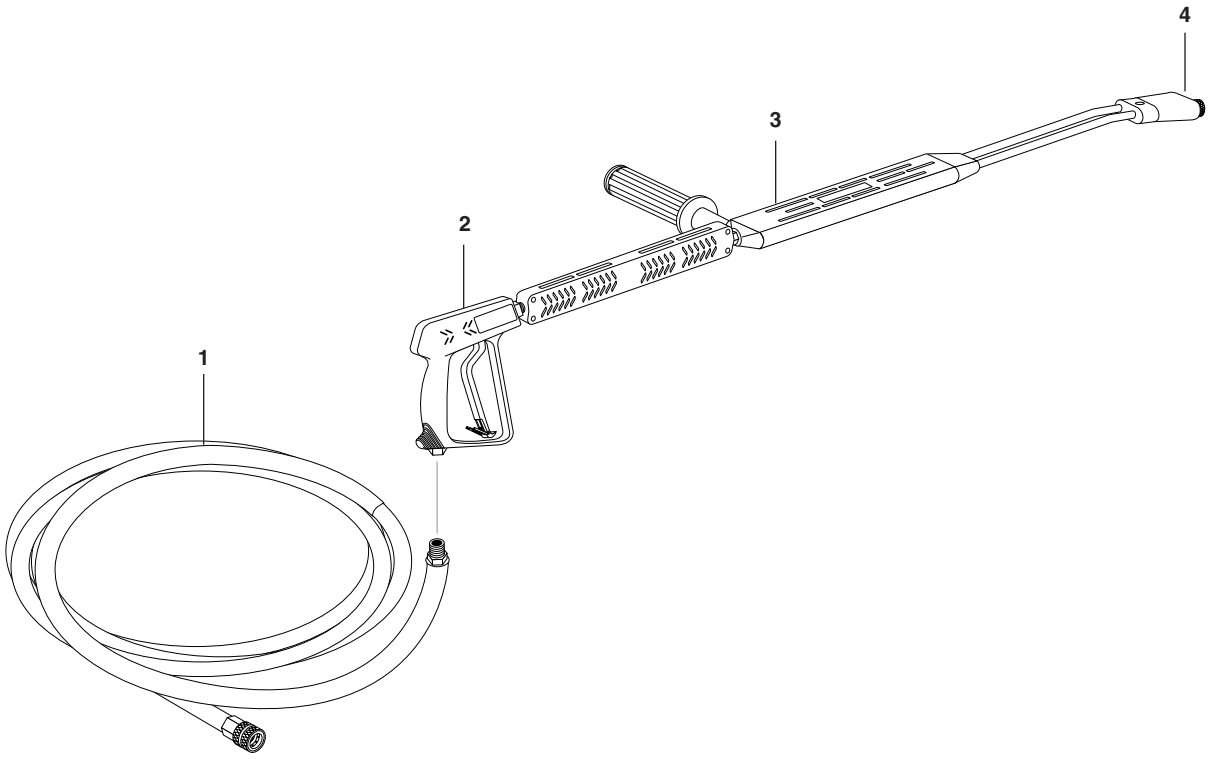



| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| R010 | 6-03915 | Box, Plastic, Back | 1 |
| R011 | 90-1001 | Bolt, 1/4" x 3/4", NC HH | 4 |
| R012 | 90-200012 | Nut, 1/4", Flange, ZN | 4 |
| R015 | 95-07200058 | Bracket, Electrical Box | 1 |
| R020 | 6-0391601 | Box, Plastic, Front, Fabricated | 1 |
| R021 | 11-1045 | Label, Electrical Box, w/o Reset (503061E/G, 503067E/G) | 1 |
| | 11-1047 | Label, Electrical Box, w/Reset (503067E, 503061E) | 1 |
| R022 | 6-039141 | Channel, .96 x 23 x 7.75 PVC, Elec | 2 |
| R030 | 4-05088 | Thermostat, Adjustable, 302° | 1 |
| R031 | 6-01270 | ▲ Conduit, Corrugated, Tubing | 3 ft |
| R040 | 6-020251 | Switch, Curvette RA901VB-B-1-1 | |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| R050 | 4-050822 | Hour Meter, 115VAC 60HZ (503061E/G, 503067E/G) | 1 |
| | 4-050823 | Hour Meter, 12-28 VDC (503067E, 503061E) | 1 |
| R060 | 6-020530 | Light Indicator, Green 125V (503061E/G, 503067E/G) | 1 |
| | 6-020590 | Light Indicator, Green 12V (503067E, 503061E) | 1 |
| R080 | 6-041250 | Breaker, 1658-G41-02-P10-25A (503067E, 503061E) | 1 |
| R090 | 6-03671 | ▲ Relay, P&B, VF4-41H11, 12V/40A (503067E, 503061E) | 1 |
| R091 | 90-1999 | ▲ Screw, 10/32" x 3/4" BH SOC CS (503067E, 503061E) | 1 |
| R092 | 90-1994 | ▲ Screw, 10/32" x 1-1/4" (ground) | 1 |
| R093 | 90-017 | ▲ Nut, 10/32" | 8 |
| R094 | 11-1042 | ▲ Label, Ground | 1 |

▲ Not Shown

## SSD HOSE/SPRAY GUN ASSEMBLY & PARTS LIST
### ALL MODELS




| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | 4-02083450C | Hose, 50' x 3/8", 2 Wire, Red, 4000 PSI | 1 |
| 2 | 4-01246 | Spray Gun, Shut-Off, AP 1000 | 1 |
| 3 | 4-0111341A | Wand, VP w/Coupler & Nozzle | 1 |

| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 4 | 2-2000 | Coupler, 1/4" | 1 |
| | 2-20023 | Coupler, 1/4" Female | 1 |
| | 2-0003 | ▲ Nipple, 1/4" Steel | 1 |
| | 2-0119 | ▲ O-Ring, Replacement Only | 1 |
| | 2-0132 | ▲ Seal, 1/4" Replacement Only | 1 |

▲ Not Shown

## BECKETT BURNER SPECIFICATIONS

| Model No. | Burner Assy No. | Fuel Nozzle | Transformer | Burner Motor | Fuel Pump/ Solenoid/Cord | Fuel Solenoid Coil | Electrode |
|---|---|---|---|---|---|---|---|
| SSD-503061E | 7-00030 | 7-0103 | 7-515242 | 7-21699 | 7-00098 | 7-21854U | 7-5780 |
| SSD-503061E/G | 7-00011 | 7-01284 | 7-51824 | 7-21344U | 7-21844U | 7-21755U | 7-578703 |
| SSD-503067E | 7-00030 | 7-0103 | 7-515242 | 7-21699 | 7-00098 | 7-21854U | 7-5780 |
| SSD-503067E/G | 7-00011 | 7-01284 | 7-51824 | 7-21344U | 7-21844U | 7-21755U | 7-578703 |

## WAYNE BURNER SPECIFICATIONS

| Model No. | Burner Assy No. | Fuel Nozzle | Transformer | Burner Motor | Fuel Pump | Fuel Solenoid Coil | Electrode |
|---|---|---|---|---|---|---|---|
| SSD-503061E/G | 7-00034 | 7-0127 | 7-20358 | 7-0005 | 7-0009 | 7-0009611 | 7-13286 |
| SSD-503067E/G | 7-00034 | 7-0127 | 7-20358 | 7-0005 | 7-0009 | 7-0009611 | 7-13286 |

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **LOW OPERATING PRESSURE** | Faulty pressure gauge | Install new gauge. |
| | Insufficient water supply | Use larger supply hose; clean filter at water inlet. |
| | Old, worn or incorrect spray nozzle | Match nozzle number to machine and/or replace with new nozzle. |
| | Belt slippage | Tighten or replace; use correct belt. |
| | Plumbing or hose leak | Check plumbing system for leaks. Retape leaks with teflon tape. |
| | Faulty or misadjusted unloader valve | Adjust unloader for proper pressure. Install repair kit when needed. |
| | Worn packing in pump | Install new packing kit. |
| | Fouled or dirty inlet or discharge valves in pump | Clean inlet and discharge valves. |
| | Worn inlet or discharge valves | Replace with valve kit. |
| | Obstruction in spray nozzle | Remove obstruction. |
| | Leaking pressure control valve | Rebuild or replace as needed. |
| | Slow engine RPM | Set engine speed at proper specifications. |
| | Pump sucking air | Check water supply and possibility of air seepage. |
| | Valves sticking | Check and clean or replace if necessary. |
| | Unloader valve seat faulty | Check and replace if necessary. |
| **BURNER WILL NOT LIGHT** | Little or no fuel | Fill tank with fuel. |
| | Improper fuel or water in fuel | Drain fuel tank and fill with proper fuel. |
| | Clogged fuel line | Clean or replace. |
| | Plugged fuel filter | Replace as needed. |
| | Misadjusted burner air bands | Readjust air bands for clean burn. |
| | Little or no fuel pressure from fuel pump | Increase fuel pressure to specification and/or replace fuel pump. Test with pressure gauge. |
| | Faulty burner transformer | Test transformer for proper arc between contacts. Replace as needed. |
| (continued on next page) | Disconnected or short in electrical wiring | All wire contacts should be clean and tight. No breaks in wire. |

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **BURNER WILL NOT LIGHT** (continued from previous page) | Flex coupling slipping on fuel pump shaft or burner motor shaft | Replace if needed. |
| | On-Off switch defective | Check for electrical current reaching burner assembly with burner switch on. |
| | Heavy sooting on coil and burner can cause interruption of air flow and shorting of electrodes | Clean as required. |
| | Improper electrode setting | Check and reset according to diagram in Operator's Manual. |
| | Fuel not reaching combustion chamber | Check fuel pump for proper flow. Check solenoid flow switch on machines with spray gun control for proper on-off fuel flow control. |
| | Clogged burner nozzle | Replace. |
| | Thermostat faulty or slow engine speed | Increase engine RPM to increase voltage. |
| | Flow switch malfunction | Remove, test for continuity and replace as needed. |
| | Flow solenoid malfunction | Replace if needed. |
| **FLUCTUATING PRESSURE** | Valves worn | Check and replace if necessary. |
| | Blockage in valve | Check and replace if necessary. |
| | Pump sucking air | Check water supply and air seepage at joints in suction line. |
| | Worn piston packing | Check and replace if necessary. |
| **MACHINE SMOKES** | Improper fuel or water in fuel | Drain tank and replace contaminated fuel. |
| | Improper air adjustment | Readjust air bands on burner assembly. |
| | Low fuel pressure | Adjust fuel pump pressure to specifications. |
| | Plugged or dirty burner nozzle | Replace nozzle. |
| | Faulty burner nozzle spray pattern | Replace nozzle. |
| | Heavy accumulation of soot on coils and burner assembly | Remove coils and burner assembly, clean thoroughly. |
| | Misaligned electrode setting | Realign electrodes to specifications. |
| | Obstruction in smoke stack | Check for insulation blockage or other foreign objects. |
| | Low engine RPM | Increase RPM. |

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **LOW WATER TEMPERATURE** | Improper fuel or water in fuel | Replace with clean and proper fuel. |
| | Low fuel pressure | Increase fuel pressure. |
| | Weak fuel pump | Check fuel pump pressure. Replace pump if needed. |
| | Fuel filter partially clogged | Replace as needed. |
| | Soot build-up on coils not allowing heat transfer | Clean coils. |
| | Improper burner nozzle | See burner specifications (page 23). |
| **WATER TEMPERATURE TOO HOT** | Incoming water to machine warm or hot | Lower incoming water temperature. |
| | Fuel pump pressure too high | See specifications for proper fuel pressure. |
| | Fuel pump defective | Replace fuel pump. |
| | Detergent line sucking air | Tighten all clamps. Check detergent lines for holes. |
| | Defective temperature switch | Replace. |
| | Incorrect fuel nozzle size | See burner specifications (page 23). |
| | Insufficient water supplied | Check water G.P.M. to machine. |
| | Restrict water flow | Check nozzle for obstruction, proper size. |
| **PUMP NOISY** | Air in suction line | Check water supply and connections on suction line. |
| | Broken or weak inlet or discharge valve springs | Check and replace if necessary. |
| | Excessive matter in valves | Check and clean if necessary. |
| | Worn bearings | Check and replace if necessary. |
| **PRESENCE OF WATER IN OIL** | Oil seal worn | Check and replace if necessary. |
| | High humidity in air | Check and change oil twice as often. |
| **WATER DRIPPING FROM UNDER PUMP** | Piston packing worn | Check and replace if necessary. |
| | O-Ring plunger retainer worn | Check and replace if necessary. |
| | Cracked piston | Check and replace if necessary. |
| | Pump protector | Lower water supply pressure. Do not run with spray gun closed longer than 2 minutes. |

# TROUBLESHOOTING

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| **OIL DRIPPING** | Oil seal worn | Check and replace if necessary. |
| **EXCESSIVE VIBRATION IN DELIVERY LINE** | Irregular functioning of the valves | Check and replace if necessary. |
| **DETERGENT NOT DRAWING** | Air leak | Tighten all clamps. Check detergent lines for holes. |
| | Restrictor in float tank is missing | Replace restrictor. Check for proper orifice in restrictor. |
| | Filter screen on detergent suction hose plugged | Clean or replace. |
| | Dried up detergent plugging metering valve | Disassemble and clean thoroughly. |
| | High viscosity of detergent | Dilute detergent to specifications. |
| | Hole in detergent line(s) | Repair hole. |
| | Low detergent level | Add detergent, if needed. |
| **PUMP RUNNING NORMALLY BUT PRESSURE LOW ON INSTALLATION** | Pump sucking air | Check water supply and possibility of air seepage. |
| | Valves sticking | Check and clean or replace if necessary. |
| | Nozzle incorrectly sized | Check and replace if necessary (See serial plate for proper size). |
| | Unloader valve seat faulty | Check and replace if necessary. |
| | Worn piston packing | Check and replace if necessary. |
| **BURNER MOTOR WILL NOT RUN** | Fuel pump seized | Replace fuel pump. |
| | Burner fan loose or misaligned | Position correctly, tighten set screw. |
| | Defective control switch | Replace switch. |
| | Loose wire | Check and replace or tighten wiring. |
| | Defective burner motor | Replace motor. |
| **RELIEF VALVE LEAKS WATER** | Relief valve defective | Replace or repair. |

## OIL CHANGE RECORD

**Check** pump oil level before first use of your new pressure washer. **Change** pump oil after first 50 hours and every 3 months or 500 hours thereafter. Use SAE 30 weight oil, non-detergent.

| Date Oil Changed Month/Day/Year | No. of Operating Hours Since Last Oil Change | Brand Name and Type of Oil (see above) |
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## MAINTENANCE

| Maintenance Operation | | Every 8 Hrs or Daily | 25 Hrs or Weekly | 50 Hrs or Monthly | 100 Hrs or Yearly | Yearly |
|---|---|---|---|---|---|---|
| Check Oil | Pump | | X | | | |
| | Engine | X | | | | |
| Change Oil | Pump | | | | | X |
| | Engine | | | X | | |
| Air Cleaner | | Check | | Clean | | |
| Spark Plug | | | | | X | |
| Check Valve Clearance | | | | | | X |
| Fuel Tank Filter | | | | | X | |
| Water Filter/Clean | | Check | | | | X |

# PRESSURE WASHER WARRANTY

## SHARK LIMITED NEW PRODUCT WARRANTY
## PRESSURE WASHERS

### WHAT THIS WARRANTY COVERS

All SHARK PRESSURE WASHERS are warranted by SHARK to the original purchaser to be free from defects in materials and workmanship under normal use, for the periods specified below. This Limited Warranty is subject to the exclusions shown below, is calculated from the date of the original purchase, and applies to the original components only. Any parts replaced under this warranty will assume the remainder of the part's warranty period. This warranty applies to the original purchaser and is not transferable.

### LIMITED LIFETIME PARTS WARRANTY:

Components manufactured by SHARK, such as frames, handles, coil wraps, float tanks, and belt guards. Forged brass pump manifold. All heating coils will have a three year warranty. Internal components on the oil-end of all pressure washer pumps will have a seven year warranty.

### ONE YEAR PARTS WARRANTY:

All other components, excluding normal wear items as described below, will be warranted for one year on parts. Warranty on these parts will be for one year regardless of the duration of the original component manufacturer's part warranty.

### WARRANTY PROVIDED BY OTHER MANUFACTURERS:

Motors, generators, and engines, which are warranted by their respective manufacturers, are serviced through these manufacturers' local authorized service centers. SHARK cannot provide warranty on these items.

### WHAT THIS WARRANTY DOES NOT COVER

This warranty does not cover the following items:

1. Normal wear items, such as nozzles, guns, discharge hoses, wands, quick couplers, seals, filters, gaskets, O-rings, packings, pistons, pump valve assemblies, strainers, belts, brushes, rupture disks, fuses, pump protectors.
2. Damage or malfunctions resulting from accidents, abuse, modifications, alterations, incorrect installation, improper servicing, failure to follow manufacturer's maintenance instructions, or use of the equipment beyond its stated usage specifications as contained in the operator's manual.
3. Damage due to freezing, chemical deterioration, scale buildup, rust, corrosion, or thermal expansion.
4. Damage to components from fluctuations in electrical or water supply.
5. Normal maintenance service, including adjustments, fuel system cleaning, and clearing of obstructions.
6. Transportation to service center, shop labor charges, field labor charges, or freight damage.

### WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE

While not required for warranty service, we request that you register your SHARK pressure washer by returning the completed registration card. In order to obtain warranty service on items, you must return the product to an Authorized SHARK Dealer, freight prepaid, with proof of purchase, within the applicable warranty period. If the product is permanently installed, you must notify your Authorized SHARK Dealer of the defect. The Authorized Dealer will file a claim, which must subsequently verify the defect. In most cases, the part must be returned to SHARK freight prepaid with the claim. For warranty service on components warranted by other manufacturers, the Authorized Dealer can help you obtain warranty service through these manufacturers' local authorized service centers. If you are unable to resolve the warranty claim satisfactorily, write to SHARK at 4275 N.W. Pacific Rim Blvd., Camas, WA 98607, ATTN: Warranty Dept., detailing the nature of the defect, the name of the Authorized Dealer, and a copy of the purchase invoice.

### LIMITATION OF LIABILITY

SHARK'S liability for special, incidental, or consequential damages is expressly disclaimed. In no event shall SHARK'S liability exceed the purchase price of the product in question. SHARK makes every effort to ensure that all illustrations and specifications are correct, however, these do not imply a warranty that the product is merchantable or fit for a particular purpose, or that the product will actually conform to the illustrations and specifications. **THE WARRANTY CONTAINED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.** SHARK does not authorize any other party, including authorized Dealers, to make any representation or promise on behalf of SHARK, or to modify the terms, conditions, or limitations in any way. It is the buyer's responsibility to ensure that the installation and use of SHARK products conforms to local codes. While SHARK attempts to assure that its products meet national codes, it cannot be responsible for how the customer chooses to use or install the product.

SHARK PRESSURE WASHERS
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